Do welfare and labour market institutions influence unemployment duration of immigrants? Evidence from 11 European countries

Meyer Christensen, A.; Pavlopoulos, D.

2010

CEPS
INSTEAD

WORKING PAPERS

Do welfare and labour market institutions influence unemployment duration of immigrants? Evidence from 11 European countries

Anna MEYER CHRISTENSEN
Dimitris PAVLOPOULOS

Working Paper n°2010-04
Avril 2010

Do welfare and labour market institutions influence unemployment duration of immigrants? Evidence from 11 European countries

By: Anna Meyer Christensen and Dimitris Pavlopoulos

Abstract

This paper investigates the effect of institutions on the unemployment gap between immigrants and natives in 11 EU-countries. We study whether benefits provide disincentive effects as the job-search theory suggests or rather efficiency gains as alternative theories propose. Further than the existing literature, we study unemployment duration instead of unemployment incidence, we distinguish between exits to inactivity, primary and secondary employment and we use individual-level measures for unemployment benefits. We apply a competing-risk event-history model using the ECHP. Our results favour the efficiency-gains argument for granting immigrants benefits as we find that benefits reduce unemployment duration and prevent transitions into inactivity. Employment perspectives of immigrants are better when demand for low-skilled labour is high, employment protection is low and immigration policy is labour-market oriented.

Keywords: benefits, employment protection, event-history model, immigrants, low-skilled labour, unemployment duration

1. Introduction

Increasing immigration is a challenge faced by most EU countries. In most countries, however, labour market integration of immigrants is rather poor. Unemployment is a crucial indicator of this poor labour market integration. Unemployment rates among immigrants is much higher than for natives in most European countries (Berthoud 2000; Cheung and Heath 2007; OECDc). The large unemployment gap has caused great political and public concern as it is assumed to challenge social cohesion as well as undermine the sustainability of welfare states (Zimmermann 1995; OECDb). In some countries, immigrants have been accused of moral hazard, i.e. overusing unemployment benefits or social assistance.

However, the size of the unemployment gap between immigrants and natives differs considerably between European countries. In Anglo-Saxon and Southern European countries, the unemployment rates of immigrants and natives are almost equal. In contrast, in Scandinavia, unemployment rates of immigrants almost double unemployment rates of natives (OECDc). These differences have been interpreted as an effect of institutional differences and more specifically as a reflection of benefit generosity (Jensen 2006; Holm 2007). This perception not only thrives in the public opinion, but is also present in several research reports (see, e.g. Velfærdskommissionen). Despite these interesting cross-country differences, only a few comparative studies have been conducted in a European context (notable examples are Kogan 2007; 2006; 2003; Kesler 2006; Cohen and Kogan 2007; Fleischmann and Dronkers 2007).

Previous European studies are not only relatively scarce, but they have typically focussed on only one indicator of labour market integration, namely on cross-country differences in unemployment rates or unemployment incidence. However, for policy-makers that aim at securing long-term labour market integration of immigrants, it is important to know what determines the differences between immigrants and natives in the transitions out of unemployment. Moreover, besides studying whether the chances of finding a job differs between unemployed immigrants and natives, it is particularly pertinent to investigate whether unemployed immigrants and natives differ in

the quality of job that they manage to find.[1] Inferior labour market integration may apply more to the quality of the job that immigrants are able to find than to the aggregate job-finding probability (Kogan 2007). Exits from unemployment to inactivity are relevant as well. The 'discouraged worker' problem (Borjas 2005) may also be relevant for immigrant-native differences.

A final issue is that most previous studies have relied on macro-level indicators of institutions. For example, the effect of economic incentives to leave unemployment is typically measured by the inclusion of welfare regime dummy variables (see e.g. Kogan 2006). Such proxies are often not very valid measures of institutions as they may capture the effect of several other cross-country differences (such as differences in wage structure and cultural practises, to mention just a few examples). Therefore, further research – which takes these shortcomings into account – is needed in order to establish whether there indeed exists a causal link between institutions and the labour market integration of immigrants.

The aim of this paper is to investigate the effect of institutions – unemployment-related benefits, immigration policy, employment protection legislation and the size of the low-skilled labour force – on the unemployment-duration gap between immigrants and natives in 11 European countries. Our analysis extends the existing literature in three ways: Firstly, we investigate institutional effects on the unemployment-duration gap between immigrants and natives as opposed to incidence of unemployment that has been the typically-used independent variable. Secondly, we distinguish between transitions into inactivity, the primary and secondary labour market. Thirdly, we also introduce institutional measures for unemployment-related benefits at the individual level rather than merely using aggregate proxies. The method we apply is a competing risk event-history model using monthly data from ECHP and covering the period 1994-2001. Taking this approach, we improve our ability to make causal inferences about how institutions affect the unemployment gap between natives and immigrants.

The outline of the paper is the following. Section 2 provides an overview of the theoretical framework guiding the present paper and the previous empirical findings in the field. Data and

methodology are explained in section 3. The empirical findings are presented in section 4. This section presents first some descriptive figures on the relationship between the duration gap and the four main institutional variables and afterwards the results from the competing-risks event-history model. The conclusions in section 5 are accompanied by some recommendations for further research and policy.

2. Institutions and unemployment of immigrants

Welfare state and labour market institutions are assumed to prevent the conflicting desires of employers and workers from 'balancing out' and finding the equilibrium (Esping-Andersen 1990). This argument is often used in the discussion about the differences in unemployment rate between the US and Europe (Blau and Kahn 1996). It is often claimed that the relative higher rates and longer duration of unemployment especially in continental Europe compared to the US are caused by institutions such as strict employment protection and high levels of unemployment benefits. Our conviction, however, is that some institutions constitute employment barriers particularly for immigrant and hence cause differences in the duration of unemployment between immigrants and natives. This is also in accordance with the cross national variation in the unemployment gap between immigrants and natives (OECDc). Following the literature; we consider that the most important institutions affecting the gap in unemployment duration between immigrants and natives are unemployment-related benefits, employment structure particularly with respect to the size of the secondary labour market, employment protection legislation and the strictness and focus of the immigration policy.

Unemployment benefits: disincentives or efficiency gains?

According to the job-search theory (Mortensen 1986), unemployment benefits inevitably create disincentives for employment as they increase the reservation wage[2] of job seekers. These disincentives are larger for job seekers at the bottom of the income distribution as the level of benefits is closer to the reservation wage of these workers especially in countries with flat-rate benefits[3] (Borjas 2005). Disincentive effects may therefore be more pronounced for immigrants as they tend to

be employed in low-wage occupations (Elliot and Lindley 2007). Moreover, even controlling for previous wage, unemployed immigrants who receive generous benefits may stay longer in unemployment if they have a lower 'taste for work' than natives (Borjas 2005) as often assumed by politicians and the general public.[4]

The economic job search theory implicitly assumes that the behaviour of individual is only driven by financial considerations. However, non-financial employment motivation may be relevant here, as well (Nordenmark 1999). More specifically, we argue that benefits may act as a stepping stone for the unemployed and hence disincentive effects of benefits may therefore be offset by efficiency gains (Sinn 1995; Sinn 1996; Headey and Muffels 2008; Tatsiramos 2009). Unemployment benefits provide *financial resources*, enabling job seekers to take risks. Therefore, unemployment benefits will indirectly encourage job seekers to make long-term investments and not only worry about short-term economic gains. There are two positive mechanisms working in this direction. Firstly, the provision of unemployment benefits during education or training removes cash constraints from human capital investments. This is particularly important for immigrants as they tend to have lower country-specific human capital and/or suffer from the lack of recognition of educational credentials acquired in their country of origin. Secondly, benefits may enable the unemployed to sustain longer job search and hence find a job in line with their skills. Considering immigrants, access to benefits may be even more beneficial for the quality of their job match, as it may take more effort for them to get a job in line with their educational attainment. Except for *financial resources*, unemployment benefits may also influence the *personal resources* of the unemployed. Access to benefits during unemployment may prevent marginalisation (Goul Andersen 2007) and hence influence the well-being and the attitudes of the unemployed which is crucial for a successful job search. Finally, we may expect that the job-seeker who receives benefits during unemployment may be less likely to make transitions into inactivity (see, e.g. Addison and Portugal 2003) due to the increase in both financial and personal resources. Therefore, the labour supply of immigrants may be affected positively by the access to unemployment-related benefits. From this line of reasoning, we expect that the disincentive effects of unemployment benefits to be offset by efficiency gains.

Labour market institutions

Labour market institutions may also be relevant for the unemployment gap between immigrants and natives. Employment protection legislation is potentially important as it affects the hiring and firing costs for employers. Arguably, strict employment protection makes employers screen job applicants more critically in order to spot potential low-productive workers (Gangl 2003; Giesecke and Groß 2003; Kogan 2007). In the absence of perfect information on the productivity of workers, employers may give preference to job applicants from population subgroups that are assumed to have high average productivity potential. In this way, they apply 'statistical discrimination' against several groups including low educated, female workers, young people and immigrant job seekers (Phelps 1972; Aigner and Cain 1977; Kogan 2006). This may increase unemployment duration for such workers. By contrast, employers in flexible labour markets are assumed to be more prone to use a 'trial and error' strategy as screening device (Giesecke and Groß 2003) and hence immigrants leave unemployment easier. The effect of employment protection legislation has not been investigated in much detail as previous comparative studies have mainly focused on unemployment incidence instead of duration (Cohen and Kogan 2007; Fleischmann and Dronkers 2007; Kogan 2006). However, the main finding of these studies is that the unemployment and inactivity gap between immigrants and natives increases with the strictness of employment protection legislation.

Strict employment protection legislation may also account for a higher ethnic occupational segregation, with immigrants mainly occupying the poorer jobs in the secondary sector (Doeringer and Piore 1971; Kogan 2007). There are however also other theoretical explanations for the higher concentration of immigrants in the secondary segment. Piore (1986) and Kogan (2007) suggest that this is also due to less native competition and lower appreciation of human capital in the secondary labour market. The acceptance of poor jobs by immigrants is believed to be caused by their ignorance of labour market conditions of the host country, their expectation of a temporary stay in Europe (Bonacich 1972) and the even poorer average quality of jobs in their home countries (MacKenzie and Forde 2009). Following this reasoning, we expect quicker transitions of immigrants in the secondary sector of the labour market in countries with a large low-skilled sector.

Immigration policy

A further institutional feature often argued to influence the labour market integration of immigrants is the immigration policy of the host country (Kogan 2003; Lewin-Epstein, Semyonov et al. 2003). This influence is indirect as immigration policy may affect the skills' composition (Borjas 1987) and health status among the immigrant population (Ekberg 1990). If immigration policy is strict and tailored to meet labour market needs, immigrants are assumed to be selected according to their skills and therefore easier to integrate into the labour market. However, if immigration policy is strongly affected by humanitarian considerations giving preference to refugees, or if it is more lenient, immigrants are more likely to be 'negatively selected' as seen from a labour market perspective and their labour market integration will be more difficult (Borjas 1987; Chiswick 1999). Perhaps most importantly, in the case of a humanitarian-focused immigration policy, the immigrant population will contain more individuals with mental and physical problems and hence more problematic perspectives for labour market integration. Furthermore, asylum seekers and refugees very often come from countries from which the transferability of skills – educational attainment, labour market experience, and language – to a European context is rather difficult. It is therefore often expected that the more lenient, or the more determined by humanitarian considerations, the policy of immigration is, the larger the unemployment gap between immigrants and natives becomes.

Summing up the main hypotheses which will be tested by our empirical analysis we first of all pose two conflicting hypotheses about the effect of benefits. It is expected from the job search theory that (generous) benefits generally increase unemployment duration and that the effect might be strongest for immigrants (hypothesis 1). However, according to alternative theories we expect the disincentives effects of granting benefits to immigrants to be offset by efficiency gains (hypothesis 2). Secondly, we expect strict employment protection legislation to lead to longer duration of unemployment for immigrants than for natives, increased occupational segregation and inactivity gap between immigrants and natives (hypothesis 3). Thirdly, we expect the unemployment-duration gap to be smaller when the demand for low skilled labour is high (hypothesis 4). Finally, we expect

immigrants to experience longer duration of unemployment and to be more likely to exit from the labour market when immigration policy is determined by humanitarian considerations (hypothesis 5).

3. Data and Methodology

Data

Our data come from the European Community Household Panel (ECHP) which is a standardized longitudinal household survey conducted in 15 European countries (EUROSTAT 2003). The ECHP consists of 8 waves corresponding to the period 1994 to 2001. The data provides extensive information on labour market status, job and demographic characteristics. Especially for labour market status the ECHP offers retrospective monthly information for every year prior to the survey. This makes it particularly suitable for event-history analysis.

The analysis focuses on unemployed individuals from 18 to 65 years.[5] Eleven out of the 15 ECHP countries are used in our analysis as we had to exclude Luxembourg, the UK, the Netherlands and Sweden due to data limitations. After excluding the left-censored unemployment spells, our sample includes 31,307 spells of which 1,023 are non-EU immigrants.

The definition of immigrant status is based on country of birth rather than on citizenship. The chosen definition is more comparable across countries since citizenship legislation differs considerably between European countries (Peracchi and Depalo 2006). More specifically, we have selected the immigrants coming from non-EU countries and excluded the immigrants from other EU countries. For 9 out of the 11 countries we use the variable pm007c that distinguishes between those being born in the country of residence, or in a non-EU country. In the case of Germany and Greece the variable pm007c was not available and the immigrant status is derived from other variables referring to citizenship, mother tongue and immigration trajectory.[6]

The variable referring to the receipt of unemployment benefit is crucial for our analysis. In fact, we extend the approach of Tatsiramos (2009) and we derive a variable representing the replacement rate.[7] As ECHP does not provide direct monthly information on the receipt of unemployment benefits,

we had to derive this information from the yearly amount of benefits (variable pi131), from the number of months in unemployment and from whether the individual receives benefits at the time of the survey (variable ps009). If the unemployed individual does not receive any benefits the replacement rate is set to 0.

The following three macro-level variables are used: the index for Employment Protection Legislation (EPL), the size of the low-skilled labour market and an index for the strictness of immigration policy. The EPL index is based on the level of hiring and firing regulations and the easiness of using temporary contracts (OECDa). The size of the low-skilled labour market is a self-constructed variable measuring the percentage of workers employed in the secondary sector. More specifically, following Kogan (2006; 2007), we use the ISEI occupational scale and we set the threshold of the secondary sector to number 33 of this scale.[8] This threshold is also used in the definition of the destination states in our analysis, i.e. primary and secondary labour market. Finally, following Kogan (2006) we use the percentage of asylum seekers out of the total number of non-EU immigrants as a macro-level proxy for the strictness and focus of immigration policy. No other more precise indicator for immigration policy is available.

The list of control variables includes measures for human capital, health status and demographic characteristics of the individuals as well as country dummies and regional unemployment rate[9].

Methodology

The aim of this paper is to study the gap in unemployment duration between immigrants and natives. Therefore, we employ an event-history model distinguishing between three competing risks: inactivity, primary and secondary labour market. After organizing our data in a person-month file, we apply a discrete-time event-history model by estimating a multinomial logit regression (Allison 1982). In this model, the dependent variable is the conditional probability that an individual i makes the transition into state m in time point t conditional that she/he has remained in unemployment until time point $t-1$. This probability depends on a function of the duration of unemployment t -

duration dependence - and on several institutional and demographic characteristics. For the duration of unemployment (after testing several functions) we use the logarithmic specification that performed best. Furthermore we control for unobserved heterogeneity using a parametric approach.[10] By correcting for unobserved heterogeneity, we control for possible bias in duration dependence as well as possible correlation between competing risks (Vermunt 2002; Blossfeld, Golsch et al. 2007). The transition probability for an individual *i* to a competing risk *m* conditional of remaining *t* months in unemployment and of a vector of observed characteristics $\mathbf{X}_{it}$ is:

$$P_m(X_{it}, t, \epsilon_i) = \frac{\exp(b_0^m + b_1^m \cdot \ln t + b_2^m \cdot X_{it} + \lambda^m \cdot \epsilon_i)}{1 + \sum_{m'=1}^{4} \exp\left(b_0^{m'} + b_1^{m'} \cdot \ln t + b_2^{m'} \cdot X_{it} + \lambda^{m'} \cdot \epsilon_i\right)}$$

In this formula, ϵ_i represents the unobserved individual effects. It is time-constant and independent of the observed characteristics, but their effect varies per destination state m. We further assume that ϵ_i follows the standard normal distribution.

4. Empirical findings

Descriptive statistics

Before proceeding to the multivariate analysis, we perform some descriptive analysis to give an overview of the main associations with respect to our research questions. In Figure 1 we plot the correlation of the unemployment-duration ratios with our main variables of interest: average replacement rate of unemployment benefits (at country level), EPL, the size of the low-skilled labour force and the percentage of asylum seekers. A first important finding is that according to the immigrant-native gap in the duration of unemployment at the country level, the Scandinavian countries, Denmark and especially Finland, are no longer the poorest performers. Finland is outperforming even the Southern European countries.[11] This contrasts the findings of previous research that used unemployment incidence which suggested that the immigrant-native unemployment gap is the largest in Scandinavian countries. Combining our findings with the results of previous research, we conclude that although immigrants are probably much more frequently

unemployed than natives in Scandinavia, they experience much more persistent unemployment in some Continental European countries.

'FIGURE 1 here'

The macro-level correlations show that the average replacement rate is not associated with the average unemployment duration. Thus, at the macro level, our descriptive statistics show no indication of a disincentive effect of benefits. On the contrary, the size of the secondary sector is strongly negatively correlated with the unemployment-duration gap while both EPL and the percentage of asylum seekers are positively correlated. Therefore, labour market institutions may have an ambiguous effect on the unemployment-duration gap between immigrants and natives. Specifically, the effect of the size of the low-skilled sector and the strictness of Employment Protection may well be cancelling each other out. In contrast, the effect of a humanitarian focused immigration policy has the expected negative effect on the immigrant's employment opportunities. However, all 4 graphs indicate a possible existence of non-linearities in the relation between institutions and the unemployment-duration gap. This will be tested in our multivariate model.

Kaplan Meier estimates

Before presenting the results of the multivariate analysis we look at differences in the survival probability between immigrants and natives by means of the Kaplan Meier function. As shown in Figure 2, immigrants stay longer in unemployment before moving to any of the exit states (secondary labour market, primary labour market and inactivity). These immigrant-native differences are statistically significant according to the log-rank test. However, the graphs for the different exit states point to different interpretations. If we look at the differences in survival estimates for exits to the primary and the secondary labour market there are clear signs of barriers for immigrant employment. More specifically, among those exiting into both the primary and the secondary labour market 75 %

of the natives are still unemployed after approximately one year, while around 85 % of the immigrants are in the same situation (see figure 2 below). The Kaplan Meier estimates for exits to inactivity tell us a different story. As evident from figure 2 immigrants stay longer in unemployment than natives before exiting into inactivity. This suggests that immigrants may be more committed job-seekers than natives.

'FIGURE 2 here'

Multivariate analysis

As shown in previous section, there are considerable differences in the unemployment duration of immigrants and natives and our descriptive statistics support the idea that institutions indeed may be a cause thereof. We will now have a closer look to what extent these descriptive findings are supported by the results from the econometric model . In total, we estimated 3 different discrete-time survival models. In all models, the risk set consists of individuals being unemployed and the dependent variable is the probability of exiting unemployment to one of the exit states in month *t* conditional on having survived in unemployment until month *t-1*. The 3 models differ in the specification of the unemployment-benefit variable and in the sample used. More specifically, in Model 1 we include our full sample and the measure for unemployment benefit is a dummy indicating whether the individual receives benefits or not. Model 2 includes instead our measure for replacement rate, but the sample is restricted to 9 countries (we exclude France and Finland due to potential data problems).[12] Model 3 uses the same measure for replacement rate, but ignores the relevant data problem and uses all 11 countries.

Estimates on the predictors

Table 1 presents the results of Models 1-3. In this section, we focus our discussion on the effects of the main covariates of the models: the immigration dummy, the measures for unemployment benefits, the EPL, the size of the low-skilled labour force and immigration policy. The results of Model 1 indicate that receiving *unemployment benefits* generally increases the likelihood of becoming employed in the secondary labour market for both natives and immigrants. However, unemployment benefits seem to be rather irrelevant for exits to the primary labour market as their effect is statistically significant, but very small. As far as exits to inactivity are concerned, receiving benefits decreases the likelihood of exiting to this state for both immigrants and natives. The difference in the effect between immigrants and natives is not statistically significant. The findings on exits from unemployment to employment and in particular to the secondary labour market clearly contradict the considerations of job-search theory. However, cross-country differences in the generosity of benefits may be relevant here. This is why we now turn to the results from model 2 and 3 where the level of the replacement rate is used instead of the dummy for receiving unemployment benefits.

'TABLE 1 here'

The results from the two models which include the replacement rate (model 2 and 3) are remarkably similar, which indicates that the problem with the robustness of the replacement rates for France and Finland does not bias our analysis. Some interesting differences between natives and immigrants emerge in the effect of the replacement rate. For natives, the replacement rate increases the likelihood of exiting to the secondary labour market. This effect is U-shaped as it is higher for the lowest and the highest replacement rates. In contrast, for immigrants this effect has an inverse-U shape as it is almost zero – slightly negative actually – at the low and high replacement rates and positive for medium-level replacement rates. This is an indication of possible disincentives effects of

granting the most generous benefits to immigrants when exiting into the secondary labour market. To investigate the size of these disincentive effects we calculated the predicted hazard of leaving unemployment for immigrants who receive no benefits and for those receiving the highest level of benefits at 6, 12, 18 and 24 months of unemployment duration (see table 2). We discover here that the differences in the predicted hazard of leaving unemployment to the secondary labour market between immigrants receiving no benefits and those receiving the highest level of benefits are neither substantial nor statistically significant. For natives, however, we see that those who receive the highest level of benefits are in fact leaving unemployment faster than the natives receiving no benefits and the difference is generally statistically significant. Therefore, the immigrant-native difference that emerged probably is produced by the positive effect of receiving the highest level of benefits for natives – an effect which does not exist for immigrants. However, as no difference in the predicted hazard for immigrants receiving no benefits and the highest level of benefits emerges, we can conclude that the disincentives effects for immigrants are not substantial.

'TABLE 2 here'

As far as the effect of replacement rate on the likelihood of exiting to the primary labour market is concerned, it remains U-shaped for natives. However, this effect becomes negative for the mid-level replacement rates. The effect of benefits on transitions into the primary labour market is not significantly different for immigrants and natives.

All-in-all, the results of our survival model using the more accurate replacement rate also clearly contradict the predictions of the job-search theory – especially in the case of exits to the secondary labour market – as there are no signs of substantial disincentives effects of benefits for either immigrants or natives. In all cases, individuals receiving unemployment benefits exit faster to the secondary labour market than individuals that are not covered by any unemployment protection

scheme. This might be due to less marginalization of the unemployed that receive benefits. In other words, the *resource effect* might here be stronger than the *disincentives effects* (Goul Andersen 2007). The results with respect to exits to the primary segment of the labour market do not indicate a negative and decreasing effect of the replacement rate either, as job-search theory would suggest.

The effect of the replacement rate on transitions to inactivity is fully in accordance with our theoretical considerations. The likelihood for such a transition decreases with the replacement rate. For natives, this effect is higher for the medium to high level replacement rates, while the effect for immigrants is much higher for low replacement rates. It seems that unemployment benefits create incentives for individuals to remain in active job search and not to withdraw from the labour market. Moreover, this mechanism appears to be more important for immigrants receiving low replacement rates.

We will now turn to the results for our three macro variables. As the findings are similar for the three models, we present results jointly. For natives, an increase in the *size of the low-skilled labour force* increases the likelihood for exiting into inactivity in all three models and decreases the likelihood for exiting to the primary labour market in model 1.[13] In contrast, the likelihood for exiting to both segments of the labour market increases for immigrants. The effect of the low-skilled labour force is almost linear as the relevant quadratic terms are very small. Our findings suggest that natives, in labour markets with a large secondary sector, might be more prone to choose to exit from the labour market due to the difficulties of finding 'appropriate' jobs in the primary sector. However, immigrants seem to have better job chances when the secondary sector is large. These findings generally are in line with our theoretical expectations from the dual labour market theory.

Contrary to the size of the low-skilled labour force, the *EPL* generally has an insignificant effect for natives. For immigrants on the other hand the effect of EPL is significant. Specifically, the results indicate that as the Employment Protection Legislation becomes stricter, immigrants have increasing difficulties to exit to both the secondary and the primary labour market. This partly confirms our hypotheses. However, in contrast to our expectations, there is no indication that a stricter

EPL increases occupational segregation as there is not much difference in the effect of EPL between exits into the different segments of the labour market. Moreover, there is no significant evidence that a stricter EPL increases transitions to inactivity for immigrants.

Finally, *immigration policy* is to some extent important for the employment opportunities of immigrants. More specifically, the higher the percentage of asylum seekers in a country is the lower the likelihood of an immigrant to exit to the secondary labour market. It is a bit surprising – considering our theoretical expectations – that the same is not the case for transitions into the primary labour market. This also contradicts the expectation that immigrants, in countries with a large share of asylum seekers, would be more likely to exit into inactivity. The small effect of the proportion of asylum seekers might be explained by the existence of more extensive integration measures in countries with a humanitarian focused immigration policy. This is also in line with the findings of Blos et. al (1997). Another possible explanation is that our measure for immigration policy is not completely robust. This suspicion emerges due to the surprising effects for the natives. More specifically, in models 2 and 3, both the likelihood for a transition to inactivity and to the primary labour market is decreasing with the percentage of asylum seekers.

5. Conclusions and discussion

In this paper, we investigated the effect of institutions on the gap in unemployment duration between immigrants and natives in 11 European countries using data from the European Community Household Panel. Specifically, we studied the effect of unemployment benefits, Employment Protection Legislation, the size of the low-skilled labour market and the focus of immigration policy. Contrary to most previous comparative studies, we modelled unemployment duration instead of unemployment incidence or aggregate unemployment rates. Moreover, as differences in unemployment exits between natives and immigrants may involve differences in the quality of jobs and differences in exits from the labour force (inactivity), we simultaneously studied exits to inactivity, the secondary and the primary labour market. Our modelling approach was a discrete-time survival model with the aforementioned 3 competing risks and a parametric control for unobserved

heterogeneity. Finally, while previous studies modelled effects of unemployment benefits at the country level, we modelled these effects at the individual level.

Our results clearly refute the widespread arguments about the disincentive effects of granting unemployment benefits to immigrants (hypothesis 1). Firstly, the ranking of European countries with respect to the immigrant-native unemployment gap changes considerably when we focus on the average unemployment duration instead of the aggregate unemployment rates. When focussing on unemployment duration, the countries with the most generous unemployment benefits, i.e. the Scandinavian countries, are no longer the poorest performers. Some continental European countries score a much larger gap than the Scandinavian countries. This suggests that the high unemployment rates of immigrants in Scandinavia are caused by frequent, but relatively short unemployment spells whereas the opposite is probably the case for Continental European countries.

However, the most convincing evidence against the disincentive effects of benefits comes from our multivariate models. According to the results of these models, immigrants and natives that receive benefits with a replacement rate below 75% find a job in the secondary segment of the labour market faster than those that receive no benefits. At first glance, some disincentives effects of receiving the highest benefits for immigrants exiting into the secondary labour market seem to exist. However, the size of this effect is not substantial. The positive effect of benefits on the conditional job-finding probability holds also for exits to the primary segment for immigrants and natives that receive low replacement rates. A clear negative effect emerges only for exits to the primary segment for immigrants and with a replacement rate between 50-75 %. Nevertheless, instead of a disincentive effect, we argue that this may be interpreted as a stimulating effect of unemployment provision: immigrants with high skills and job motivation take advantage of the high replacement ratios and prolong their job search until they find a job that fits their skills and preferences. The overall positive effect of benefits on the labour market integration of immigrants is verified by their negative effect on transitions to inactivity. Immigrants receiving benefits are much less possible to become inactive than those receiving no benefits. We therefore generally find support for hypothesis 2, which stated that the disincentives effects of granting immigrants access to benefits are offset by efficiency gains. The main

reason for the fact that our results contradict the conclusions of previous research is most likely that we measure the effects of benefits at the individual level and not at the aggregate welfare regime level. Therefore, the effect found by other studies using welfare regime dummies are driven probably by differences in wage structure or culture rather than differences in work incentives.

Several differences emerge in the effect of labour market characteristics on the employment possibilities of natives and immigrants. In accordance to our expectations, the immigrant-native gap decreases with the demand for labour skilled labour (hypothesis 4). More specifically, for immigrants, the (conditional) job-finding probability in both segments of the labour market increases with the demand for low-skilled labour. It seems, therefore, that the demand for low-skilled labour not only increases the employment chances of immigrants in the secondary sector, but it also introduces spill-over effects of this phenomenon by increasing their employability in the primary sector.

The results regarding the effects of employment protection legislation are partly in accordance with our expectations stated in hypothesis 3. Strict employment protection decreases the (conditional) job-finding probability in both sectors of the labour market. The immigrant-native gap in unemployment duration is increasing with EPL, which suggests that statistical discrimination towards immigrants may be at stake when employment protection is strict. However, we find no evidence that support the assumption that strict employment protection increases ethnical job-segregation nor do we find that the inactivity gap between immigrants and natives are increasing.

As far as immigration policy is concerned, immigrants have better employment performance in countries where immigration is labour-market oriented rather than humanitarian-oriented (hypothesis 5). However, the effect of immigration policy is minor also indicating that a humanitarian focused immigration policy may go ‘hand in hand’ with a sound labour integration of the immigrants.

All in all, our results question the effectiveness of labour market integration policies based on assumptions of employment disincentives and moral hazard among immigrants. Generous social protection can even be beneficial for immigrant employment as it prevents immigrants from becoming marginalised and moving further away from the labour market. However, it might be beneficiary to

accompany such an approach with policies tackling (statistical) discrimination, while facilitating degree-recognition programs and special schooling for immigrants. Further research, with richer, but currently unavailable datasets on immigrants can shed more light into these issues.

References

Addison, J. T. and P. Portugal. 2003. Unemployment Duration: Competing and Defective risks. *Journal of Human Resources* 38 (1): 156-191.

Aigner, D. T. and G. G. Cain. 1977. Statistical Theories of Discrimination in Labour Markets. *Industrial and Labor Relations Review* 30 (2): 175-187.

Allison, P. A. 1982. Discrete-Time Methods for the Analysis of Event Histories. In *Sociological Methodology* by S. Leinhardt, 61-98. San Francisco: Jossey-Bass.

Berthoud, R. 2000. Ethnic employment penalties in Britain. *Journal of Ethnic and Migration Studies* 26 (3): 389-416.

Blau, F. D. and L. M. Kahn. 1996. *At Home and Abroad: U.S. Labor Market Performance in International Perspective*. New York: Russell Sage Foundation.

Blos, M., P. Fischer, et al. 1997. The impact of migration policy on the labour market performance of migrants: a comparative case study. *New Community* 23 (4): 511-535.

Blossfeld, H. P., K. Golsch, et al. 2007. *Techniques of event history modeling using Stata*. *New approaches to causal analysis*. Mahwah: Erlbaum.

Bonacich, E. 1972. A Theory of Ethnic Antagonism: The Split Labor Market. *American Sociological Review* 37 (5): 547-559.

Borjas, G. J. 1987. Self-Selection and the Earnings of Immigrants. *American Economic Review* 77 (4): 531-553.

Borjas, G. J. 2005. *Labor Economics*. New York: McGraw-Hill.

Cheung, S. Y. and A. Heath. 2007. *Unequal Chances: Ethnic Minorities in Western Labour Markets.* Oxford: Oxford University Press.

Chiswick, B. R. 1999. Are Immigrants Favourably Self-Selected? *American Economic Review* 89 (2): 181-185.

Cohen, Y. and I. Kogan. 2007. Next Year in Jerusalem … or in Cologne? Labour Market Integration of Jewish Immigrants from the Former Soviet Union in Israel and Germany in the 1990's. *European Sociological Review* 23 (2): 155-168.

Doeringer, P. B. and M. J. Piore. 1971. *Internal Labor Markets and Manpower Analysis*. Lexington, Massachusetts: Lexington Books & D.C. Heath and Company.

Ekberg, J. 1990. Immigrants—Their economic and social mobility. In *Generating equality in the welfare state. The Swedish experience,* 289-313 by I. Persson. Oslo: Norwegian University Press.

Elliot, R. J. R. and J. K. Lindley. 2007. Immigrant Wage Differentials, Ethnicity Occupational Segregation. *Journal of the Royal Statistical Society: Series A* 171 (3): 645-671.

Esping-Andersen, G. 1990. *The three Worlds of Welfare Capitalism*. Cambridge: Polity Press.

EUROSTAT 2003. *ECHP UDB, Description of variables – Data Dictionary, Codebook and Differences between Countries and Waves*. Luxembourg: EUROSTAT.

Fleischmann, F. and J. Dronkers (2007). *The Effects of Social and Labour Market Policies of EU-countries on the Socio-Economic Integration of First and Second Generation Immigrants from Different Countries of Origin*. Florence: European University Institute, Department of Political and Social Sciences.

Gangl, M. 2003. *Unemployment Dynamics in the United States and West Germany: Economic Restructuring, Institutions, and Labour Market Processes*. Heidelberg and New York: Physica-Verlag.

Giesecke, J. and M. Groß. 2003. Temporary Employment: Chance or Risk? *European Sociological Review* 19 (2): 161-177.

Goul Andersen, J. 2007. The Danish Welfare State as 'Politics for Markets': Combining Equality and Competitiveness in a Global Economy. *New Political Economy* 8 (1): 71-78.

Headey, B. and R. Muffels. 2008. Do Generous Welfare States Generate Efficiency Gains which Counterbalance Short Run Losses? Testing Downside Risk Theory with Economic Panel Data for the U.S., Germany and The Netherlands. *Social Indicators Research* 86 (2): 337-354.

Holm, L. (2007). *Folketinget og Udlændingepolitikken - diskurser om naturaliserede, indvandrere og flygninge 1973-2002* [The parliament and the immigration policy - discourses about the naturalised, immigrants and refugees 1973-2002]. Aalborg: Aalborg Universitet, Akademiet for Migrationsstudier i Danmark.

Jensen, Kristian. "Mere åben indvandring til Danmark og begrænsninger i adgangen til overførselsindkomster for indvandrere" [More open immigration to Denmark and restrictions in the access to benefits for immigrants]. Politiken, June 15, 2006, http://www.skm.dk/ministeren/taler/4943.html

Kesler, C. 2006. Social Policy and Immigrant Joblessness in Britain, Germany and Sweden. *Social Forces* 85 (2): 743-770.

Kogan, I. 2003. Ex-Yugoslavs in the Austrian and Swedish Labour Markets: the Significance of the Period of Migration and the Effect of Citizenship Acquisition. *Journal of Ethnic and Migration Studies* 29 (4): 595-622.

Kogan, I. 2006. Labour markets and Economic Incorporation among Recent Immigrants in Europe. *Social Forces* 85 (2): 679-722.

Kogan, I. 2007. *Working through Barriers – Host Country Institutions and Immigrant Labour Market Performance in Europe.* Dordrecht: Dordrecht.

Lewin-Epstein, N., M. Semyonov, et al. 2003. Institutional Structure and Immigrants Integration: a Comparative Study of Immigrants' Labour Market Attainment in Canada and Israel. *International Migration Review* 37 (2): 389-420.

MacKenzie, R. and C. Forde. 2009. The rhetoric of the 'good worker' versus the realities of employers' use of the experiences of migrant workers. *Work, Employment and Society* 23 (1).

Mortensen, D. T. 1986. Job search and Labour Market Analysis. In *Handbook of Labor Economics.* by O. Ashenfelter and R. Layard, 849-919. Amsterdam: North Holland.

Nordenmark, M. 1999. Non-Financial Employment Motivation and Well-being in different Labour Market Situations: A Longditudinal Study. *Work, Employment and Society* 13 (4): 601-620.

OECDa, "OECD Employment Outlook: 2004," OECD, http://www.oecd.org/dataoecd/8/4/34846856.pdf

OECDb, "OECD Economic Survey of Denmark 2005 - Is the welfare system sustainable," OECD, http://www.oecd.org/dataoecd/57/31/34375766.pdf

OECDc, "Unemployment rates of foreign- and native-born populations," OECD, http://www.swivel.com/data_sets/show/1005041

Peracchi, F. and D. Depalo (2006). *Labour Market Outcomes of Natives and Immigrants: Evidence from the ECHP*. Washington: World Bandk, SP Discussion Papers no. 0615.

Phelps, E. S. 1972. The Statistical Theory of Racism and Sexism. *American Economic Review* 62 (4): 659-661.

Piore, M. J. 1986. The Shifting Grounds for Immigration. *Annals of the American Academy of Political and Social Science* 485: 23-33.

Sinn, H.-W. 1995. A Theory of the Welfare State. *Scandinavian Journal of Economics* 97 (4): 495-526.

Sinn, H.-W. 1996. Social Insurance, Incentives and Risk-taking. *International Tax and Public Finance* 3 (3): 259-280.

Tatsiramos, K. 2009. Unemployment Insurance in Europe: Unemployment Duration and Subsequent Employment Stability. *Journal of the European Economic Association* 7 (6).

Velfærdskommissionen, "Analyserapport – Fremtidens velfærd – sådan gør andre lande" [Analysis report - The future welfare - this is what other countries do], Velfærdskommissionen, http://www.ac.dk/files/pdf/Rapport_-_globalisering.pdf

Vermunt, J. K. 2002. A General Latent Class Approach to Unobserved Heterogeneity in the Analysis of Event History Data. In *Applied Latent Class Analysis* by J. Hagenaars and A. McCutcheon, 383-407. Cambridge: Cambridge University Press.

Zimmermann, K. F. 1995. Tackling the European Migration Problem. *Journal of Economic Perspectives* 9 (2): 45-62.

[1] The only exception is one of the analyses in Kogan (2007). Here Kogan analyses differences in transitions in and out of unemployment between immigrants and natives in the UK and in Germany.

[2] The reservation wage refers to the lowest wage for which the individual is willing to work (Borjas 2005).

[3] Many European countries have in practise – despite formal legislation – have approached flat rate benefits.

[4] This argument has been very popular in the political debate in some countries. The former Employment Minister of Denmark, Claus Hjort Frederiksen, argued that: '*That it* [the poor labour market integration of immigrants] *to a great extent concerns culture* (see e.g. Hjort Frederiksen 2007).

[5] Unemployed where the forwarded main activity is either full time or part time employed participation in employment related activities such as apprenticeship or training etc. or self-employment.

[6] Variables pm008, pt025 and pm001, respectively.

[7] Monthly unemployment related benefits relative to previous wage.

[8] The ISEI scale is an international standardized measure for occupational status developed by Ganzeboom. The occupations assigned the scores from 16 to 33 on this scale are unskilled, semi-skilled and low-skilled occupations.

[9] Further details can be attained upon request.

[10] The literature has suggested two approaches to correct for unobserved heterogeneity: a parametric approach and a non-parametric one. After comparing the two approaches using the Bayesian Information Criterion (BIC) and the Akaike Information Criterion (AIC), we apply a parametric approach assuming normal distribution of the individual unobserved effect.

[11] The large difference in the unemployment gap between Finland and Denmark may be explained by the fact that the composition of the immigrant population is very different. A large part of immigrants in Denmark consists of asylum seekers or family reunified immigrants. In Finland on the other hand there is a relative large proportion, of the non-EU (in the period of reference) immigrants (more than 1/3) who comes from neighboring countries (Russia and Estonia in particular). These immigrants are likely to be labour migrants. As the journey is short they are also more likely to return to their home country in case they do not find a job.

[12] The large difference in the unemployment gap between Finland and Denmark may be explained by the fact that the composition of the immigrant population is very different. A large part of immigrants in Denmark consists of asylum seekers or family reunified immigrants. In Finland on the other hand there is a relative large proportion, of the non-EU (in the period of reference) immigrants (more than 1/3) who comes from neighboring countries (Russia and Estonia in particular). These immigrants are likely to be labour migrants. As the journey is short they are also more likely to return to their home country in case they do not find a job.

[13] The effect on the likelihood of exiting to inactivity, however, does not differ significantly between immigrants and natives.

Figure 1. The association between average duration and the institutional variables

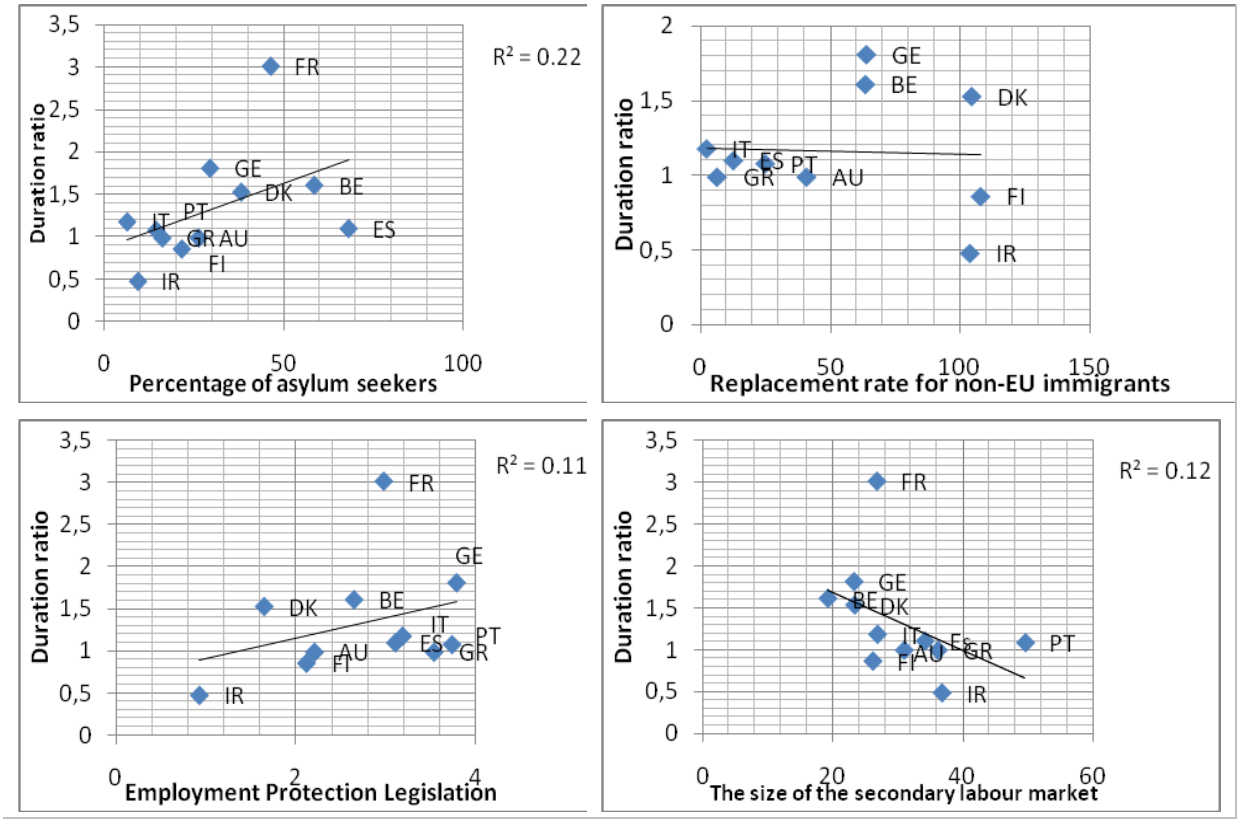

Figure 2. Kaplan Meier survival estimates for the three exits from unemployment

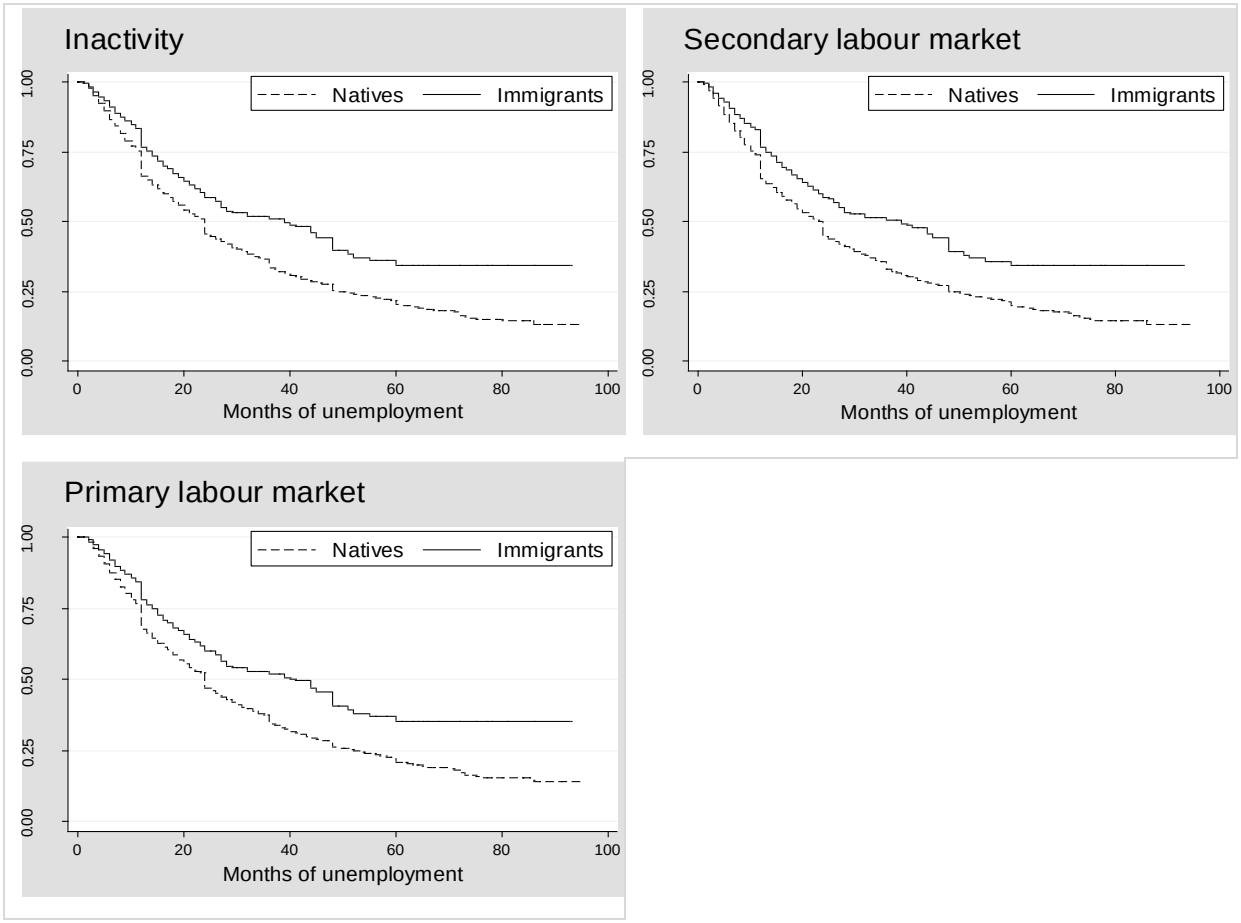

Table 1. Results of the competing risk duration model

	Model 1*			**Model 2**			**Model 3**		
	Inact.	Sec.	Prim.	Inact.	Sec.	Prim.	Inact.	Sec.	Prim.
Intercept	**-7,613**	**-4,855**	-1,185	**-6,925**	**-21,965**	**13,721**	**-6,897**	**-21,914**	**13,908**
	(0,924)	(0,735)	(0,607)	(1,047)	(0,800)	(0,669)	(1,008)	(0,800)	(0,663)
Cfactor: intercept	-0,063	**1,542**	**-1,375**	-0,070	**1,545**	**-1,371**	-0,067	**1,545**	**-1,374**
	(0,036)	(0,025)	(0,025)	(0,036)	(0,025)	(0,025)	(0,036)	(0,025)	(0,025)
Non-EU	0,132	0,122	-0,472	0,167	-0,036	-0,444	0,186	-0,061	-0,337
	(0,646)	(0,743)	(0,569)	(0,601)	(0,671)	(0,554)	(0,613)	(0,674)	(0,554)
Age	**-0,033**	**0,063**	**0,116**	**-0,034**	**0,062**	**0,115**	**-0,034**	**0,062**	**0,115**
	(0,011)	(0,012)	(0,011)	(0,011)	(0,012)	(0,011)	(0,011)	(0,012)	(0,011)
Age2	**0,001**	**-0,001**	**-0,002**	**0,001**	**-0,001**	**-0,002**	**0,001**	**-0,001**	**-0,002**
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Female	**0,492**	**-1,025**	**0,448**	**0,493**	**-1,026**	**0,452**	**0,492**	**-1,023**	**0,452**
	(0,062)	(0,058)	(0,044)	(0,062)	(0,058)	(0,044)	(0,062)	(0,058)	(0,044)
Children<12 years	-0,078	0,060	**-0,224**	-0,081	0,053	**-0,225**	-0,077	0,053	**-0,224**
	(0,093)	(0,051)	(0,060)	(0,094)	(0,051)	(0,060)	(0,094)	(0,051)	(0,060)
Married	0,046	**0,294**	**0,419**	0,055	**0,293**	**0,434**	0,054	**0,296**	**0,439**
	(0,083)	(0,057)	(0,059)	(0,083)	(0,057)	(0,059)	(0,083)	(0,057)	(0,059)
Female*children	**0,629**	**-0,253**	**-0,205**	**0,625**	**-0,250**	**-0,196**	**0,628**	**-0,250**	**-0,202**
	(0,099)	(0,073)	(0,072)	(0,099)	(0,073)	(0,072)	(0,099)	(0,072)	(0,072)
Female*married	**0,639**	**0,190**	**-0,493**	**0,634**	**0,197**	**-0,511**	**0,630**	**0,194**	**-0,513**
	(0,089)	(0,074)	(0,069)	(0,089)	(0,074)	(0,069)	(0,089)	(0,074)	(0,069)
Medium edu.	**-0,247**	**-0,623**	**0,747**	**-0,233**	**-0,611**	**0,747**	**-0,238**	**-0,616**	**0,754**
	(0,041)	(0,040)	(0,036)	(0,041)	(0,040)	(0,036)	(0,041)	(0,040)	(0,036)
High edu.	**-0,229**	**-1,745**	**1,550**	**-0,215**	**-1,733**	**1,550**	**-0,226**	**-0,737**	**1,549**
	(0,057)	(0,076)	(0,045)	(0,058)	(0,075)	(0,046)	(0,058)	(0,075)	(0,046)
Poor health	**0,278**	**-0,319**	**-0,289**	**0,288**	**-0,313**	**-0,300**	**0,273**	**-0,316**	**-0,292**
	(0,058)	(0,052)	(0,050)	(0,058)	(0,051)	(0,050)	(0,058)	(0,052)	(0,050)
Very poor health	**0,972**	**-0,806**	**-0,875**	**0,975**	**-0,789**	**-0,898**	**0,970**	**-0,793**	**-0,886**
	(0,066)	(0,095)	(0,099)	(0,066)	(0,094)	(0,099)	(0,067)	(0,095)	(0,100)
Lnseqvar	**0,213**	**-0,044**	-0,009	**0,210**	**-0,041**	-0,008	**0,218**	**-0,041**	-0,006
	(0,017)	(0,015)	(0,015)	(0,017)	(0,015)	(0,015)	(0,018)	(0,015)	(0,015)
Reg. unempl. Rate	-0,001	**-0,025**	**-0,081**	-0,0001	**-0,026**	**-0,081**	-0,001	**-0,026**	**-0,080**
	(0,004)	(0,005)	(0,004)	(0,004)	(0,005)	(0,004)	(0,004)	(0,005)	(0,004)
Finland	**0,591**	-0,025	**0,541**	…	…	…	**0,585**	-0,021	**0,517**
	(0,177)	(0,157)	(0,120)				(0,177)	(0,156)	(0,121)
Denmark	**1,091**	**0,642**	0,075	**1,038**	**0,654**	-0,238	**1,060**	**0,620**	0,043
	(0,207)	(0,182)	(0,149)	(0,195)	(0,163)	(0,133)	(0,208)	(0,184)	(0,150)
Belgium	0,318	-0,312	**-0,647**	**0,837**	-0,216	**-0,576**	0,329	-0,301	**-0,659**
	(0,173)	(0,163)	(0,131)	(0,139)	(0,142)	(0,112)	(0,174)	(0,163)	(0,131)
France	**-0,422**	-0,088	0,131	…	…	…	**-0,440**	-0,088	0,090
	(0,122)	(0,112)	(0,087)				(0,122)	(0,112)	(0,087)
Austria	**0,849**	0,234	0,042	**0,389**	**0,258**	**-0,387**	**0,845**	0,263	0,052
	(0,207)	(0,173)	(0,146)	(0,138)	(0,127)	(0,106)	(0,207)	(0,174)	(0,146)
Italy	-0,098	**-0,489**	**-0,935**	**-0,556**	**-0,492**	**-1,220**	-0,134	**-0,492**	**-0,974**
	(0,175)	(0,144)	(0,120)	(0,146)	(0,124)	(0,105)	(0,175)	(0,144)	(0,120)
Spain	0,055	0,299	0,022	0,119	**0,345**	**-0,221**	0,040	**0,300**	-0,009
	(0,138)	(0,124)	(0,102)	(0,101)	(0,089)	(0,077)	(0,138)	(0,125)	(0,103)
Portugal	-0,687	0,036	**-1,050**	**-1,274**	0,011	**-1,403**	-0,715	0,022	**-1,066**
	(0,379)	(0,284)	(0,281)	(0,357)	(0,268)	(0,268)	(0,379)	(0,284)	(0,281)
Greece	-0,332	-0,287	**-1,022**	**-0,903**	**-0,342**	**-1,423**	-0,385	-0,334	**-1,085**
	(0,216)	(0,177)	(0,150)	(0,175)	(0,150)	(0,128)	(0,217)	(0,178)	(0,150)
Ireland	0,778	0,639	0,036	-0,385	**0,586**	**-0,814**	0,756	0,659	0,018
	(0,434)	(0,347)	(0,296)	(0,324)	(0,266)	(0,224)	(0,433)	(0,348)	(0,297)
Repl. >0 & <25 %**	…	…	…	-0,096	**0,422**	**0,383**	-0,099	**0,422**	**0,370**
				(0,094)	(0,064)	(0,061)	(0,095)	(0,064)	(0,061)
Repl. >25% & <50%	…	…	…	**-0,591**	**0,121**	-0,020	**-0,606**	**0,121**	-0,026
				(0,072)	(0,049)	(0,047)	(0,072)	(0,049)	(0,047)
Repl. >50% & <75%	…	…	…	**-0,540**	**0,178**	**-0,101**	**-0,549**	**0,175**	**-0,100**
				(0,064)	(0,046)	(0,045)	(0,065)	(0,046)	(0,045)
Repl. >75 %	…	…	…	**-0,379**	**0,332**	**0,158**	**-0,386**	**0,321**	**0,157**
				(0,061)	(0,046)	(0,044)	(0,061)	(0,046)	(0,044)
Non-EU*repl.>0 &<25%	…	…	…	**-1,540**	-0,597	-0,119	**-1,526**	-0,600	-0,110
				(0,725)	(0,379)	(0,291)	(0,725)	(0,378)	(0,293)
Non-EU*repl.>75 %	…	…	…	-0,178	**-0,604**	-0,275	-0,161	**-0,597**	-0,291

				(0,241)	(0,235)	(0,194)	(0,240)	(0,235)	(0,194)
Benefits	**-0,452**	**0,248**	**0,070**	…	…	…	…	…	…
	(0,046)	(0,035)	(0,034)						
Non-EU*benefits	-0,106	-0,400	-0,068	…	…	…	…	…	…
	(0,197)	(0,191)	(0,160)						
EPL	-0,553	0,729	-0,611	-0,867	0,731	**-0,814**	-0,551	0,765	-0,619
	(0,509)	(0,406)	(0,354)	(0,534)	(0,403)	(0,356)	(0,508)	(0,407)	(0,355)
EPL2	**0,206**	-0,113	**0,163**	**0,235**	-0,116	**0,170**	**0,206**	-0,120	**0,165**
	(0,092)	(0,073)	(0,065)	(0,096)	(0,073)	(0,065)	(0,092)	(0,073)	(0,065)
Non-EU*EPL	-0,077	**-0,406**	**-0,381**	-0,076	**-0,386**	**-0,418**	-0,093	**-0,395**	**-0,402**
	(0,182)	(0,200)	(0,168)	(0,185)	(0,193)	(0,171)	(0,182)	(0,193)	(0,173)
Size of sec. lab.	**0,073**	0,028	**-0,037**	**0,136**	0,035	0,009	**0,075**	0,028	-0,035
	(0,029)	(0,022)	(0,019)	(0,023)	(0,018)	(0,015)	(0,029)	(0,022)	(0,019)
Size of sec. lab.2	**-0,002**	-0,001	0,001	**-0,003**	-0,001	-0,000	**-0,002**	-0,001	0,001
	(0,001)	(0,001)	(0,001)	(0,001)	(0,001)	(0,001)	(0,001)	(0,001)	(0,001)
Non-EU*size	-0,055	**0,175**	**0,122**	-0,053	**0,169**	**0,124**	-0,049	**0,172**	**0,113**
	(0,050)	(0,062)	(0,044)	(0,051)	(0,060)	(0,044)	(0,050)	(0,061)	(0,045)
Non-EU*size2	0,002	**-0,004**	-0,001	0,002	**-0,004**	-0,001	0,002	**-0,004**	-0,001
	(0,001)	(0,002)	(0,001)	(0,001)	(0,002)	(0,001)	(0,001)	(0,002)	(0,001)
% of asylum seekers	0,033	-0,007	-0,005	**-0,180**	-0,027	**-0,062**	0,030	-0,008	-0,003
	(0,058)	(0,043)	(0,037)	(0,042)	(0,034)	(0,028)	(0,058)	(0,043)	(0,037)
Non-EU*asylum seekers	0,111	**-0,215**	-0,117	0,108	**-0,203**	-0,109	0,102	**-0,204**	-0,113
	(0,080)	(0,092)	(0,072)	(0,079)	(0,091)	(0,073)	(0,080)	(0,091)	(0,072)

Note that whenever the coefficient for a variable is bold for one of the three exits the variable is overall significant at least the 5 % level. Furthermore if a coefficient is bold the variable in question is significantly (also at the 5 % level) effecting the transition into that particular exit state. The standard errors are in brackets.

*Model 1: includes all 11 countries and a dummy variables for whether benefits are received ; Model 2: France and Finland are not included and the more precise measure for benefits is included; Model 3: all countries are included as well as the more precise measure for benefits.

**Repl. stands for 'replacement rate'.

Table 2. Predicted hazard for natives and immigrants receiving no benefits and more than 75 % replacement rate at 6, 12, 18 and 24 months of unemployment duration

	6 months	12 months	18 months	24 months
No benefits				
Natives	0,0276	0,0211	0,0181	0,0160
Immigrants	0,0187	0,0164	0,0154	0,0119
75 % replacement rate				
Natives	0,0431	0,0304	0,0251	0,0234
Immigrants	0,0205	0,0188	0,0161	0,0133

Note: The predicted hazards are estimated from model 3.

CEPS
INSTEAD

B.P. 48
L-4501 Differdange
Tél.: +352 58.58.55-801
www.ceps.lu